URS OPERATING SERVICES

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June 12, 2002

Ms. Sabrina Forrest
Site Assessment Manager
U.S. Environmental Protection Agency, Region VIII
999 18th Street, Suite 600, Mail Code: 8EPR-ER
Denver, Colorado 80202-2405

SUBJECT: START2, EPA Region VIII, Contract No. 68-W-00-118, TDD No. 0204-0004
Site Reassessment of the Yankton Lighting and Heating #1

Dear Sabrina:

Since the assignment of Technical Direction Document (TDD) No. 0204-0004, the Superfund Technical Assessment and Response Team (START2) has been researching locally available records trying to determine the exact location of the Yankton Lighting and Heating #1 site. START2 has reviewed all previous reports prepared for the site, reviewed all records in the EPA's Denver records center, conducted library research at the Denver Public Library and Colorado School of Mines Library, consulted available Sanborn Maps, and consulted with authors of previous reports.

The Yankton Lighting and Heating Company #1 site is listed on CERCLIS with an address of 618 Douglas (Corner of Douglas and 7th), Yankton, South Dakota 82007 (see Attachment A). START2 has been unable to confirm the address listed in CERCLIS.

Rachel Badger, the author of the 1997 Analytical Results Report (ARR) spent two days in Yankton, South Dakota, researching records to determine the location of the town gas site. She reviewed local historical society records, old newspaper records, documents archived in the local public library, and interviewed long-time residents of the community for anecdotal information. Ms Badger was able to document that a gas plant operated near the intersection of Douglas and 7th Streets between late 1905 and early 1907 (less than two years); however, she was unable to find any record of a street address. The ARR documented that the residence currently located at 618 Douglas Street was constructed in 1875 (see Attachment B).

Ms. Badger found references in the *Yankton Press and Dakotan* of coal tar being used to coat residential streets, presumably for dust control. She also determined that the lot located at the northwest corner of Douglas and 7th was reported as a vacant lot on the Sanborn Fire Insurance Maps dated 1891, 1903, and 1913. Coal would probably have been shipped to the gasification plant from the railroad freight depot located near 8th and Douglas (see Attachment C).

At the present time we do not have a physical location for the Yankton #1 coal gasification plant. Historic records seem to indicate that the facility operated for a short time (less than two years). The fact that no records giving the street address have been discovered would strongly indicate that the operation was short term. Trade publications and newspaper articles from the era indicate that coal tar was sold to local farmers as a wood preservative and insecticide and to local communities as a dust suppressant.

Prior to mobilizing to the field with a Geoprobe® to take subsurface soil samples in a attempt to locate buried waste START2 suggests that a research effort of Yankton's city records be undertaken to determine past land use of all lots on Douglas Avenue between 6th Avenue and the railroad tracks near 8th Avenue to include any potential site location. This approach would allow START2 to eliminate properties from consideration, such as the address given on CERCLIS (618 Douglas Street) which has a residence on the site that was built in 1875. START2 might not be able to locate the exact address of the former town gas site, but START2 would be able to eliminate many properties from consideration, which would allow START2 to more efficiently conduct proposed Geoprobe® work. Past research work has focused on determining the location of the coal gasification plant; the proposed effort would focus upon determining where the coal gasification plant was not located between 1905 and 1907.

This proposed effort would take approximately three to four days, depending upon travel time and the availability of Yankton municipal resources, and would incur approximately $1,200.^{00}$ to $1,500.^{00}$ in travel expenses.

If you have any questions or comments please call me at 303-291-8270.

Very truly yours,

URS OPERATING SERVICES, INC.

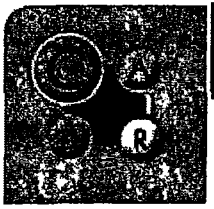
Barry Hayhurst
Environmental Scientist

cc: T. F. Staible/UOS (w/o attachment)
File/UOS

APPENDIX A

CERCLIS Database Entry

EPA United States Environmental Protection Agency **Superfund**



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CERCLIS Hazardous Waste Sites

YANKTON LIGHTING & HEATING CO #1

Site Information

Actions | Aliases | Financial | Op Units | RODs

Site Name:YANKTON LIGHTING & HEATING CO #1
Street:618 DOUGLAS (CORNER OF 7TH & DOUGLAS)
1 Unicover Center
City / State / Zip:YANKTON, SD 82007

EPA ID:SDD987674595
EPA Region:08
County:YANKTON

NPL Status: Not on the NPL
Non-NPL Status:NFRAP
Federal Facility Flag: Not a Federal Facility
Incident Category: Manufacturing Plant

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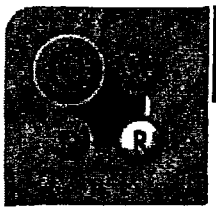
EPA United States Environmental Protection Agency

Superfund



CERCLIS | Site Info | Aliases | Ops | Fin | RODs

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YANKTON LIGHTING & HEATING CO #1

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Actions

Site Info | Aliases | Op Units | Financial | RODs

OU	Action Name	Qualifier	Lead	Actual Start	Actual Completion
00	DISCOVERY		F		06/18/1993
00	PRELIMINARY ASSESSMENT	H	F		12/16/1994
00	SITE INSPECTION	N	F	03/13/1995	06/05/1997

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APPENDIX B

SI ARR History Section

1.0 INTRODUCTION

URS Consultants, Inc. (URS) has been tasked by the U.S. Environmental Protection Agency (EPA), Region VIII, to provide an Analytical Results Report (ARR) for the Screening Site Inspection (SSI) of the Yankton Lighting and Heating Company #1 site (Yankton #1 site) in Yankton, Yankton County, South Dakota (CERCLIS ID# #SDD987674595). The site was investigated under the Superfund program. The Field Sampling Plan (FSP) for the Yankton #1 Site Focused Site Inspection (FSI) was approved by the Environmental Protection Agency Site Assessment Manager, Bob Heise, on March 13, 1995. Field activities at the Yankton #1 Site were conducted on June 27 and June 28, 1995, by URS. The SI field work included sampling and nonsampling data collection.

Sampling activities included the collection of 12 field samples. Specifically, five surface water, four sediment, and three quality assurance/quality control (QA/QC) samples (one trip blank, one rinsate and one surface water duplicate) were collected. Sampling procedures adhered to those delineated in the URS FSP for the Yankton #1 site and applicable URS Technical Standard Operating Procedures (TSOPs) for field operations at hazardous waste sites (URS Consultants, Inc. (URS) 1991).

The samples were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), total metals and cyanide. The samples were analyzed through EPA contract laboratory program (CLP), routine analytical services (RAS) laboratories. The CLP laboratories selected were CompuChem Environmental Corporation in Research Triangle Park, North Carolina, for organics analysis, and Chemtech Consulting Group in Englewood, New Jersey, for inorganics analysis.

This ARR is designed to be used in conjunction with the URS documents "Field Sampling Plan for Screening Site Inspection, Yankton Lighting and Heating Company #1" (URS 1995a) and "Sampling Activities Report for the Yankton Lighting and Heating Company #1 site" (Appendix A) (URS 1995b).

2.0 OBJECTIVES

The purpose of the Site Inspection (SI) was to gather information for the evaluation of the Yankton #1 site in regard to the EPA's Hazard Ranking System (HRS) criteria (Office of the Federal Register 1990). The specific objectives of this focused SI were to:

- Assess the adequacy of containment of potential source areas with regard to each pathway and determine if contaminants from site source areas have been or are being released to receptor targets;

- Determine if surface water targets associated with Marne Creek have been impacted by site source areas;

- Identify the presence of additional receptor targets (e.g., wetlands, sensitive environments, residents, drinking water intakes and groundwater wells) and their distance from potential source areas; and

- Acquire nonsampling data (i.e., existing reports, analytical data, and physical measurements) documenting the location and/or existence of source areas, potential releases and receptor targets.

3.0 BACKGROUND INFORMATION

3.1 SITE LOCATION AND DESCRIPTION

The Yankton #1 site is located in the northwest quarter of Section 18, T. 93 N., R. 55 W. of the Yankton, South Dakota, Quadrangle (U.S. Geological Survey (USGS) 1968). The Yankton #1 facility was located on an unspecified corner of the intersection of Seventh Street and Douglas Street in Yankton, South Dakota (Figure 1) (Yankton County Historical Society 1993). The site was previously reported to be located at the southeast corner, but despite field reconnaissances and extensive historical reviews, URS was unable to identify the specific location of the historic gas plant located near Seventh and Douglas Streets. The street address has not been determined because the specific site location is unknown. Sanborn Fire Insurance Maps and area topography indicate that the facility may have been at or near 618 Douglas Street (URS 1993). The house at 618 Douglas street, however, was constructed in 1875, 25 years prior to the first references of a manufactured gas plant in Yankton (City of Yankton, Registrar of Deeds Office 1995). The approximate site coordinates are 42° 52' 30" N. latitude and 97° 23' 00" W. longitude (USGS 1978).

3.2 SITE HISTORY AND PREVIOUS WORK

From 1889 until approximately 1950, gas was commonly manufactured by heating coal or coke. Gas produced by this process was stored in large metal tanks called gasometers and distributed to homes and industry through steel pipe (Radian Corporation (Radian) 1985). An article obtained from the Yankton County Historical Society, published by Iowa Public Service Company, reported a coal gasification plant in operation from approximately 1904 until 1907 at the intersection of Seventh Street and Douglas Street (Yankton County Historical Society 1993). This plant was Yankton Lighting and Heating Company's first plant (Yankton #1; CERCLIS ID# SDD987674595). In 1907, the Yankton #1 plant was forced to move due to complaints of "foul and obnoxious odors" from residents in the surrounding area. From approximately 1908 until 1938, the Yankton Lighting and Heating Company operated a water gas plant at the northeast corner of the intersection of First Street and Walnut Street (Yankton #2) (CERCLIS ID# SDD987674603). Gas production at Yankton ended in approximately 1938, when use of natural gas became more prevalent (Radian 1985).

In an effort to determine the location of Yankton Lighting and Heating Company's first facility, research was conducted at the Yankton Library by reviewing "The Yankton Press and Dakotan" newspapers dated between 1904 and 1907. Several articles were located that discussed the "old gas plant" and the "new gas plant," however, none contained the address of the old plant. The articles did, however, reveal some interesting information (The Yankton Press and Dakotan 1904-1907).

An article in the October 21, 1905, edition of the Yankton Press and Dakotan mentioned the delivery of a large oil tank and a Tenney gas machine to Yankton. The Ideal Acetylene Gas Company, which later became Yankton Lighting and Heating Company, was reportedly erecting a coal gasification plant that would use this machinery. The plant was expected to start operations in November 1905. No articles were located that specified the location of the plant or when operations commenced. The Yankton Lighting and Heating Company #2 site gas plant reportedly opened in 1907 and used a Tenney gas machine to manufacture gas (The Yankton Press and Dakotan 1904-1907).

An article in the August 4, 1907, edition of the Yankton Press and Dakotan indicated that a company called International Heating and Lighting of Cleveland, Ohio, had purchased the old Yankton Plant "some time ago" with plans to convert it to use corn cobs and straw for fuel. The article also mentions that "the old plant will soon be consigned to the junk pile." Later reports indicated that the corn cob and straw gas process proved to be un-workable (The Yankton Press and Dakotan 1904-1907).

An article in the September 9, 1907, edition of the Yankton Press and Dakotan reported that the cities of Des Moines, Omaha and Sioux City were paving some lightly traveled residential streets with coal tar. The article suggests that coal tar was being generated somewhere in Yankton and that the city of Yankton was considering various use and/or disposal options for the material (The Yankton Press and Dakotan 1904-1907).

Sanborn Fire Insurance Maps from 1891, 1903, and 1912 show a vacant lot at the northwest corner of Seventh and Douglas. The maps do not show the other corners of the intersection. No additional Sanborn maps are available for the years 1904-1907, when Yankton's first gas plant was allegedly operating (Sanborn Map Company 1995).

3.3 SITE GEOLOGY AND HYDROGEOLOGY

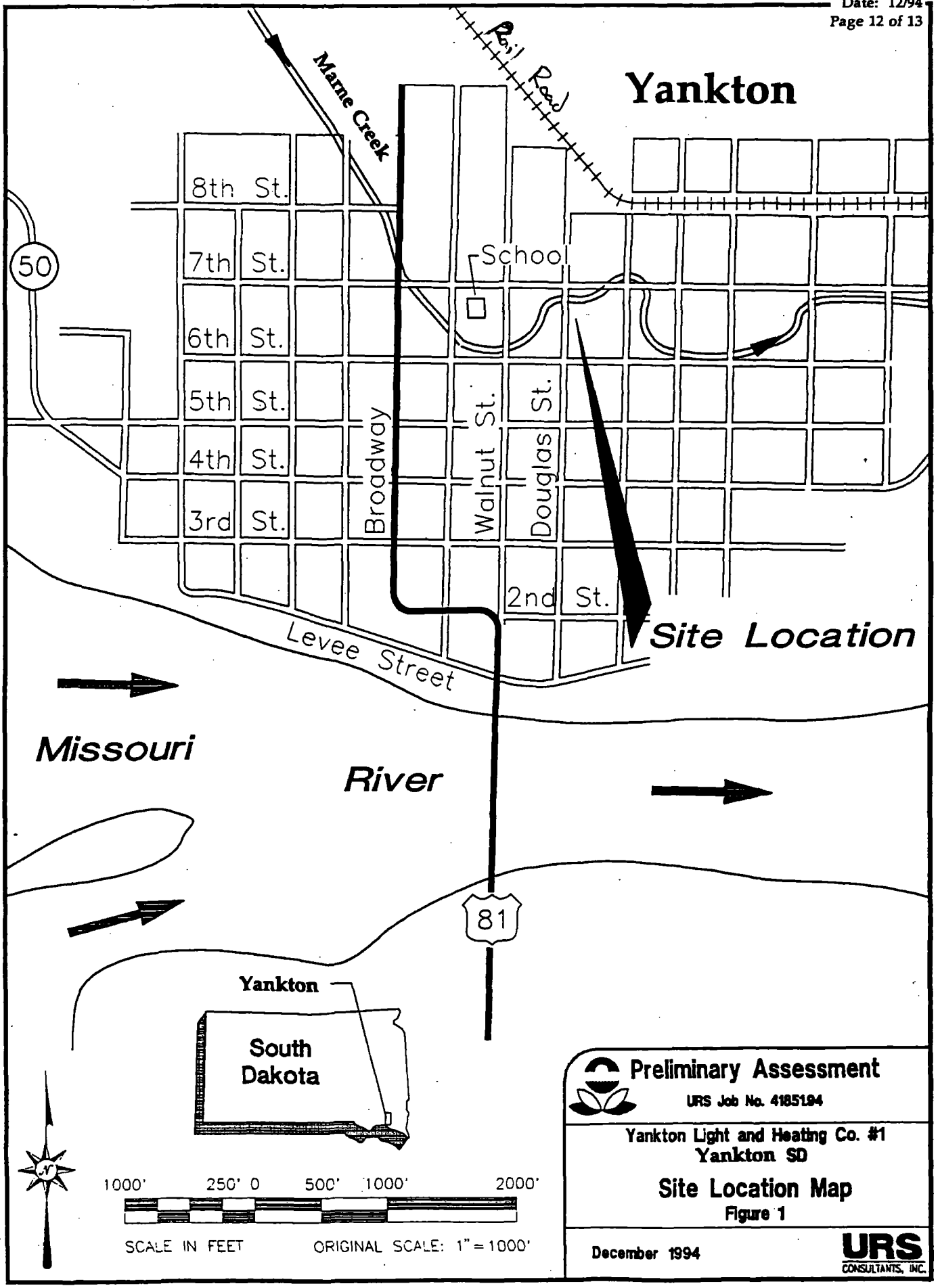
3.3.1 Geology

The Yankton #1 site is located on Quaternary Age terrace alluvial deposits from the Missouri River. The alluvial deposits are composed of silt, clay, and sand. The thickness of these deposits is approximately 20 feet. The alluvium rests upon approximately 100 feet of glacial outwash deposits. These outwash deposits are the result of deposition from braided streams and primarily consist of interbedded coarse sands and gravels (USGS 1986).

Underlying the glacial outwash and till are approximately 800 to 1,100 feet of Cretaceous Age sediments. These include the Carlile Shale, Niobrara Formation, Greenhorn Limestone, Graneros Shale, and Dakota Sandstone. Available information suggests that the Niobrara Formation, which consists of soft, calcareous shale, may be absent in the

APPENDIX C

PA Report Site Area Map



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